

MEDICINAL PLANTS OF PALAU

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ABSTRACT

Palauans used at least 190 plant species for medicinal purposes. Herein we list the plant species used, and describe preparatory and medicinal aspects of use.

INTRODUCTION

The people of the Palau Islands have long made use of the flora for medicinal purposes. Due to contact with outside cultures, much of the knowledge of Palauan folk medicines is becoming lost, and many younger Palauns are ignorant of the ethnobotanical usage of local plants.

In a study of the medicinal plants of Palau made from August 1968 to August 1970 we recorded the medicines practiced mainly by the older men (Rubak) and women (Mechas). Since many of the Palauan medicines are relatively unknown we believe that they should be documented before the older practitioners died and their secrets lost due to the impact of Western acculturation.

Palau is a remote group of about 200 islands, part of the Caroline Island complex in the Western Pacific. The largest island, Babeldaob, about 26 miles in length, is a typical volcanic island of tuffaceous breccias with angular to subangular fragments of andesite, shale and basalt tuff (Osborne 1966). Portions of Koror and the southern islands are raised reef structures of coralline limestone, while the southernmost islands of Angaur and Pelilieu are platform islands composed of limestone. The entire Palau group is bordered by fringing reefs which protect them from oceanic wave action. Temperature averages 81 F with low daily and seasonal variation while humidity varies from 77% in March to a high of about 84% in November and December. Cloud cover percent is high and rainfall varies from 120-160 inches per year (Civil Affairs

Handbook, 1944).

Previous literature on the medicinal plants of Palau is limited; Okabe (1940, 1943) listed 100 plant species used and their method of preparation and Salsedo (1970) described the uses of certain medicinal plants by Palauans.

METHODS AND MATERIALS

From August 1968 to August 1970 Carl Salsedo lived with a Palauan family and became fluent in Palauan, which provided the necessary language proficiency for communication with the Palauan informants. Every village and hamlet in the Palaus was surveyed during this time. Each village was visited for at least one or more weeks, during which time interviews were conducted, first to determine the local medical practitioners or those villagers knowledgeable about folk medicines, who were subsequently interviewed and their information recorded. The islands of Koror, Babeldaob, Pelilieu, Angaur and Kayangel were surveyed in order.

Validity of Palauan plant names and information regarding their use was determined on the basis of at least six different informants and the total number of Palauans interviewed was about 500. Botanical specimens of all medicinal plants were collected; duplicates were deposited in the Palau Herbarium at the Entomology Laboratory and specimens were sent to the Smithsonian Institution for identification. Less complete collections were deposited at the University of Guam and University of Connecticut.

Alkaloid screening was conducted at the Entomology Laboratory at Koror using the Culvenor and Fitzgerald (1963) test. Between 2-4 gms of fresh plant materials was ground in a 7.6 cm porcelain mortar with a small amount of clean sand and sufficient chloroform to yield a thick slurry. 10 ml of ammoniacal chloroform (N/20 with respect to ammonia) was added and the mixture stirred for about 1 min before filtering into a 13 x 1.2 cm test tube. The extract obtained was added to 0.5 ml. of 2N sulfuric acid, the test tube was shaken, and the phases were allowed to separate. The aqueous layer was removed with a dropper whose tip was fitted with a cotton wool plug for filtering and breaking emulsions. After removing the cotton wool and any chloroform in the dropper, two of three drops of the aqueous solution were placed in each of two 1 by 1/4 inch test tubes for testing with Mayers reagent and silicotungstic acid.

The density of the precipitate formed was assessed on a - to +4 basis by comparison with a strychnine standard (1.0 mg./ml. in 25% HCl). 0.1 ml. of strychnine solution was rated as +2; 0.5 ml. was +3; 0.7 ml. was +4.

The reagents were prepared as follows: Mayers, dry mercuric chloride (6.8 grams) and potassium (25 grams) were dissolved separately in water and diluted to make one liter of solution; Silicotungstic acid: 5 grams of silicotungstic acid was dissolved in 100 ml. of 6N sulfuric acid.

RESULTS AND DISCUSSION

A survey of all of the islands and villages of the Palau district revealed a total of 190 species of plants used medicinally for over 200 categories of cures, including 90 species of trees, 10 shrub species, 77 herb species and 23 vines (Table 1). A sampling of the more common remedies include cures to stop the bleeding of cuts, abortatives, earache, punctured eardrums, headaches, stomachaches, diarrhea, fish stings, venereal disease, asthma, woman's afterbirth medicines and boils.

Plant parts used in medicine preparation included; young and old leaves, inner and outer bark, roots, ripe and unripe fruits, sap, flowers, stems and stipules. Coconut oil was often used as a base in mixtures with various plant parts such as cures for aches, bruises and massage where the coconut oil is applied to the body and the leaves then are applied.

Medicines were applied externally or taken internally depending on the type of ailment. To apply medicines externally the plant parts were pounded together then applied to the affected area, e.g. a fish sting. For internal medicines the plant parts were pounded together and eaten or squeezed in water using a coconut fiber of cloth and drunk.

Tertiary alkaloids were in 23 of the 190 species with 11 species exceptionally rich in tertiary alkaloids: betel nut (Areca catechu L.), papaya (Carica papaya L.), cordia (Cordia subcordata Lam.), crinum (Crinum asiaticum L.), spider lily (Hymenocallis littoralis (Jacq.) Salisb.), hanging club moss (Lycopodium phlegmaria L.), tobacco (Nicotiana tabacum L.), ochrosia (Ochrosia oppositifolia (Lam.) K. Schum.), pandanus (Pandanus aimiriikensis Martelli), beach naupaka (Scaevola taccada (Gaern.) Roxb.), and Uncaria palauensis.

The young leaves in the majority of plants tested contained tertiary alkaloids whereas the majority of older leaves did not. Palauan medicinal

plant practitioners are acutely aware that the growing part of a plant contains an active ingredient. This is supported by the majority of cures specifying the use of the young leaves, followed by the older leaves, inner and outer bark, roots, unripe and ripe fruits, sap, stems, stipules and flowers.

Since all of the plants recorded in this study have been used as medicinals, it is proposed that they merit further chemical investigation to ascertain their active ingredients. Such plants may be cultivated in Palau with the concomitant benefit to the drug industry and economy of the Palau Islands.

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TABLE EXPLANATION

Individual species of plants are arranged alphabetically to family. The results of Silicotungstic acid and Mayers Reagent tests are shown in that order, expressed as - indicating no positive result for other test to +4 indicating highest abundance of the alkaloid against a strychnine standard. The following are plant parts abbreviations: Yl young leaves, L leaves, B bark, Ib inner bark, Bs basal stalk, F fruit, Fu unripe fruit, Fr ripe fruit, S sap, St stem, Stip stipule, Fl flowers.

Table 1. Summary of plant species, local names, uses and alkaloid assays of the medicinal plants.

Scientific Name	Palauan Name	Use	Part Used	Month Coll.	Locality Coll.	Assay Test
ACANTHACEAE to COMPOSITAE						
<u>Acanthus ebracteatus</u> Vahl.	Kollil	punctured eardrum	Yl	11/69	Ngermid, Koror, mangroves	- -
<u>Alternanthera sessilis</u> (L.)	Kelel a malk	bodyache, boils	L	11/68	Ngerbechd, Koror, roadway	- -
<u>Hymenocallis littoralis</u> (Jacq.) Salisb.	Bisech a chad	stop bleeding after abortion	Bs	1/69	Entomol. Lab., Koror	+4 +4
<u>Mangifera indica</u> L.	Idel	cuts	Yl	6/69	Ngermid, Koror, forest	- -
<u>Rhus taitensis</u> (Guill.)	Eues	ringworm	Yl	6/69	Airai, Bab. forest edge	- -
<u>Spondias pinnata</u> (L.) Kuns	Titimel	stop bleeding after abortion	L	6/69	Entomol. Lab., Koror	- -
<u>Cerbera manghas</u> L.	Emeridech	cuts	Yl	1/69	Ngermid, Koror, forest	- -
<u>Ochrosia oppositifolia</u> (Lam)	Uauch	festering sores	Yl	8/70	Ngchelobel, limestone isl.	+4+4
<u>Plumeria rubra</u>	Ellilai	shark bites	Yl	5/70	Entomol. Lab., Koror	- -
<u>Alocasia macrorrhiza</u> (L.) L. Schott.	Bisech er Belauu	ringworm	St	11/68	Meiungs, Koror, forest	- -
<u>Colocasia esculenta</u> (L.) Schott	Kukau sp. psechel	fish stings	St	7/70	Ngerbechd, Koror, taro patch	- -
<u>Cryptosperma chamissonis</u> Schott. Merr.	Brak sp. yars	tuberculosis	R	7/70	Ngerbechd, Koror, taro patch	- -
<u>Epipremum carolinensis</u>	Toilalech	stops bleeding	Yl	7/69	Rendrok, Koror, forest	- -
<u>Raphidophora pinnata</u>	Toilalech	stomache	St	6/70	Kayangel, coconut forest	- -

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Xanthosoma brownii</u> Deg.	Beiodech	headache, aphro.	R	7/69	Ngerbechd, Koror, forest	--
<u>Boerlagiodendron pulcherrimum</u> (Vid.)	Kesiamel	clean woman's womb after childbirth	YI	6/69	Airai, Bab., forest	--
<u>Polyscias nodosa</u> (Bl.)	Pngeii	cuts	YI	7/69	Melungs, Koror, forest	--
<u>Schefflera odorata</u> (Bl.)	Bungaruau	woman afterbirth	YI	11/68	Rock Isle, Iwayama Bay	--
	Ngursmedob	veneral disease	R	11/68	Rock Isle, Iwayama Bay	--
<u>Sarcolobus palauensis</u> Hatus	Uralanguis	abortative	YI	7/69	Ngmerid, Koror, taro patch	--
<u>Barringtonia asiatica</u> (L.) Ptdull		abortative	YI	7/69	Ngerengchol, isle, strand	--
<u>Barringtonia racemosa</u> (L.) Koranges		ear drum, cuts	L	6/69	Ngermid, Koror, forest	--
<u>Dolichandrone spathacea</u> (L.) Riu		yaws	YI			
<u>K. Schum</u>	Kairs	flavoring	F			
<u>Bixa orellana</u> L.	Burk	eyespts, catar.	YI	7/70	Ngerkesewal, Koror, garden	--
<u>Annas comosus</u> (L.) Merr.	Ongorangebard	hookworms	Fu	6/69	Idid, Koror, garden	--
<u>Canna indica</u> L.	-	hemorrhoids	Bs	12/68	Entomol. Lab, Koror, garden	--
<u>Crataeva speciosa</u> Volk.	Edepsungel	massage, sprains	L	2/69	Ngermid, Koror, garden	--
	beluu		Ib	2/69	Ngermid, Koror, garden	+1+2
<u>Carica papaya</u> L.	Bobai	abortative, cuts	YI,S	1/69	Ngermid, Koror, garden	+4+4
		backache, headache	L,R	1/69	Ngermid, Koror, garden	+4+4
			Fl	1/69	Ngermid, Koror, garden	+4+4
<u>Casuarina equisetifolia</u> L.	Ngas	abortative, teeth	Ib	1/69	Ngermid, Koror, roadside	--
		asthma	R	1/69	Ngermid, Koror, roadside	--
<u>Terminalia cattapa</u> L.	Mifich	cuts, festering	YI	11/68	Ngermid, Koror, forest edge	--
		heartburn	Fr	8/70	Ngermid, Koror, forest edge	--

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Terminalia samoensis</u> Rech.	Esmiich	yaws	L	1/68	Aulong, isle, strand	-
<u>Rheo spathacea</u> (Sw.) Stearn	Kobesos	internal aches	Yl	1/69	Entomol. Lab., Koror, gard.	-
<u>Ageratum conyzoides</u> L.	Ngmak	boils	Yl	2/69	Ngermid, Koror, roadside	+
<u>Adenostemma lavenia</u> L. Kuntze	Beraber	afterbirth med. burns	Yl	6/69	Ngermid, Koror, cliff base	-
<u>Eclipta alba</u> L. Mann.	Deberbelei	a as above, nausea dizziness	L	3/70	Ngerbechd, Koror, taro patch	-
<u>Wedelia biflora</u> (L.) DC.	Ngesil	cuts	L	6/69	Airai, Bab. strand	-
<u>Veronia cinerea</u> (L.) Less.	Ethneong	afterbirth med.	L	11/68	Ngerbechd, Koror, garden	-
CONNARACEAE to FLACOURTIACEAE						
<u>Connarus gaudichaudii</u>	Chemecherash	amoebic dysentary	Ib	3/70	Airai, Bab. forest	-
<u>Ipomoea batatas</u> (L.) Lam.	Emutii	hernia	Yl	8/70	Ngerbechd, Koror, garden	-
<u>Ipomoea congestica</u>	Oliemad	boils	L	7/69	Ngerbechd, Koror field	-
<u>Ipomoea gracilis</u> R. Br.	Torech	asthma	L	6/69	Ngerbechd, Koror, roadside	-
<u>Ipomoea pes-caprae</u> L.	Kebeas choll	venereal disease	L	1/69	Pelilieu, strand	-
<u>Merremia peltata</u> (L.) Merr.	Kebeas	asthma, mouth sore	L	7/69	Ngermid, Koror, roadside	-
<u>Desmodium umbellatum</u>	Babeluu	fish stings, tonic	L	4/70	Malakal, Koror, isle.	+
<u>Cucurbita maxima</u> Duch.	Kalbasang	abortative	Yl	2/69	Ngermid, Koror, garden	-
<u>Cyathea</u> sp.	Odopterengul	pinkeye	R	6/70	Kayangel, strand	-
<u>Fuirena umbellata</u> Rothb.	Eluu	massage	Yl	12/68	Ngermid, Koror, wet forest	-
<u>Scleria levis</u> Retz.	Desumramesei	fish stings	L	4/70	Ngerbechd, Koror, taro	-
<u>Dioscorea bulbifera</u> L.	Bakallild	stomach	Yl	7/69	Ngesoal, Koror, savanna	-
<u>Dioscorea esculenta</u> (L.) Bu	Belloi	hernia	R	3/70	Arakabesan, Koror, forest	-
<u>Codiaeum variegatum</u> (L.) Bl	Esiach	treat mentally ill	L	4/70	Airai, Bab. forest	-
	Knetquet	cuts	Yl R	6/70	Ngermid, Koror, forest edge	-

Scientific Name	Palaau	Use	Part	Month	Locality	Test
<u>Codiaeum variegatum</u> (L.) Bl.	Kesuk	cuts, sores	L, St	12/68	Entomol. Lab., Koror, garden	-
		yaws	S	12/68	Entomol. Lab., Koror, garden	-
<u>Euphorbia chamissonis</u> Kl.	Kerkar	cuts	S	6/70	Kayangel, strand	-
<u>Exocaria agallocha</u> L.	Yas	internal injuries	Ib	2/69	Ngesoal, Koror, mangroves	-
<u>Glochidion</u> sp.	Ngolem	burns, cuts	YI	1/69	Meiungs, Koror, forest edge	-
<u>Macaranga carolinensis</u> Volk.	Bdel	diarrhea	YI	11/69	Ngermid, Koror, forest edge	-
<u>Mallotus cf. tiliacifolius</u>	Leibelb	cuts	YI	4/70	Ngermid, Koror, forest edge	+
<u>Manihot esculenta</u> Crantz.	Diokang	cuts	YI	8/70	Ngerbechd, Koror, garden	-
		bruises, br. bones	R	8/70	Ngerbechd, Koror, garden	-
<u>Phyllanthus amarus</u> Sch.	Ukalla ruchel	tonic, colds	L	11/69	Entomol. Lab., Koror, lawn	-
<u>Phyllanthus palauensis</u> Hos.	Ukellela che	colds	L	1/69	Airai, Bab., savanna	-
<u>Flacourtia rukam</u> Z & M	Emechong	woman diet	cont.	B	4/70	Ngermid, Koror, forest
<u>Pangium edule</u> Reinw.	Raimel	hernia	L	2/69	Arakabesan, Koror, forest	
<u>Hanguana malayana</u> (Jack) M.	Chewais	fungus	YI	12/68	Ngesoal, Koror, swamp	
<u>Scaevola taccada</u> Roxb.	Korrai	colds, tubercul.	YI	11/68	Rendrok, Koror, strand	+4
	Korrai	irreg. menstra.	F	2/69	Rendrok, Koror, strand	-
GRAMINEAE to LAURACEAE						
<u>Bambusa vulgaris</u> Schrat Wen	Bambuu	toe fungus	B	8/70	Entomol. Lab, Koror, open	-
<u>Cenotheca lappacea</u> Desv.	Moibibuchel	cuts	L	6/70	Airai, Bab., swamp	-
<u>Cymbopogon citratus</u> Staff.	Keskus	female rite	L	2/69	Arakebesan, Koror, savanna	-
<u>Digitaria sanguinalis</u> Scop.	Chudel era	cuts	L	11/68	Ngermid, Koror, savanna	-
<u>Digitaria violascens</u> Link	Sau.	ngasech	L	7/70	Ngermid, Koror, garden	-
<u>Eragrostis domingensis</u>	Ouemoket	cuts	L	4/70	Airai, Bab., savanna	-
<u>Saccharum officinarum</u> L.	Deb	stop vomiting	YI	8/70	Ngerbechd, Koror, garden	-
<u>Saccharum spontaneum</u> L.	Bungarius	cuts	L	4/70	Ngermid, Koror, roadside	-
<u>Schizostachyum lima</u> Merr.	Lild	pinkeye	B	8/70	Ngermid, Koror, forest edge	-

Scientific Name	Papuan	Use	Part	Month	Locality	Test
<u>Callophyllum innophyllum</u>	BTaches	asthma	YI	11/68	Ngerdis, Koror, strand	-
<u>Hernandia sonora</u> L.	BTaches	hernia	F	1/69	Ngerdis, Koror, strand	-
<u>Salacia naumanii</u> Engl.	Detimel	stomach ache	L	8/70	Ngerbechd, Koror, mangrove	-
<u>Lophopyxis pentaptera</u> Engl.	Kotob	afterbirth med.	Ib	6/69	Airai, Bab., mangrove	-
	Kotob	amoebic dysentary L	L	6/69	Airai, Bab., mangrove	-
<u>Ocimum sanctum</u> L.	Chermadachar	toothache	YI	7/69	Ngerbechd, Koror, garden	-
<u>Cassytha filiformis</u> L.	Techellachull	aches, VD	YI	7/69	Arakabesan, Koror, savanna	-
LEGUMINOSAE to MALVACEAE						
<u>Caesalpinia cristata</u> L.	Tochedulik	aphrodisiac	YI	4/70	Ngermid, Koror, forest	-
<u>Canavalia rosea</u> (Sw.) DC.	Keldellel	headache	YI	7/70	Arakabesan, Koror, strand	+2+2
<u>Cassia alata</u> L.	Kerul a besoekl	ringworm	L	7/69	Arakabesan, Koror, savanna	-
<u>Cassia occidentalis</u> L.	Korriu	neckache	L	7/69	Arakabesan, Koror, savanna	-
<u>Derris elliptica</u> (Wall.) Ben	Dub sp. teche.	hernia, sores	YI	7/69	Ngesoal, Koror, forest	-
<u>Desmodium triflorum</u> (L.) DC	Olumud	dizziness	L	6/69	Airai, Bab., savanna	-
<u>Entata phaeoloides</u> Merr.	Kesebekuu	afterbirth med.	B	8/70	Ngermid, Koror, forest	-
		skin diseases	L	8/70	Ngermid, Koror, forest	-
<u>Inocarpus edulis</u> Forst.	Keam	tuberculosis	YI Ib	6/69	Ngermid, Koror, forest	-
<u>Leucaena leucocephala</u> de Wit	Telentund	abortative	YI	1/69	Ngerbechd, Koror, roadside	-
<u>Mimosa invisa</u> Mart	Toched	toothache	YI	8/70	Airai, Bab., savanna	-
<u>Ormosia calavensis</u> Azoala	Edepsungelkd	cuts	B	6/69	Ngesoal, Koror, savanna	-
<u>Pongamia pinnata</u> Merr.	Kisaks	broken bones	L	7/69	Arakabesan, Koror, strand	-
<u>Pterocarpus indicus</u> (L.) Wild Las	Las	diarrhea, tuber.	IbL	7/69	Rendrok, Koror, mangroves	-
<u>Serianthes kanehirae</u> Fosb.	Ukall	woman diet	Ib	7/69	Airai, Bab., forest	-
<u>Allium cepa</u> L.	Sebulias	carache	L	7/70	Entomol. Lab., Koror garden	-
<u>Cordyline fruticosa</u>	Sis-ditmechi	punctured eardr.	YIR	1/69	Ngermid, Koror, garden	-

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Crinum asiaticum</u> L.	Abarath (angaur)	bruises	Bs	5/70	Angaur strand	+4 +4
<u>Dracena multiflora</u> Roxb.	Oredaki	stomachache	YI	5/69	Airai, Bab., savanna	- -
<u>Fagraea ksid</u> Gilg. & Bene Ksid		hernia	R, Fr	4/70	Airai, Bab., dry savanna	- -
<u>Pemphis acidula</u> Forst.	Ngis	toothache	Ib	6/70	Rendrok, Koror, strand	- -
<u>Hibiscus tiliaceus</u> L.	Ermall	diarrhea	YI	7/69	Meiungs, Koror, mangrove	- -
MELASTOMATACEA to OKALIDACEAE						
<u>Medinilla blumeana</u> Mans.	Teketekoel	hernia	YI	3/70	Aimeilik, Bab., forest	- -
<u>Melastoma malabathricum</u>	Matakui	afterbirth	YI	6/69	Arakabasan, Koror, savanna	- -
<u>Artocarpus communis</u> Forst.	Medu	hernia	YI	11/68	Entomol. Lab., Koror	- -
<u>Ficus hispida</u> L. F.	Wosech	appetite, cuts	L, F	11/68	Entomol. Lab., Koror	- -
<u>Ficus micricarpa</u>	Lulk	fishsting	L	7/69	Aulong, isle., strand	- -
<u>Ficus tinctoria</u> Forst.	Oseked	swollen areas	L	3/70	Rendrok, Koror, strand	- -
<u>Musa sp</u>	Tuu	burns, boils	Bs	1/69	Entomol. Lab., Koror, gard.	- -
<u>Musa sp</u>	Tuu sp Erasech	dysentary	Bs	4/70	Airai, Bab., garden	- -
<u>Musa sp</u>	Tuu sp Mechad	earache	S	4/70	Airai, Bab., garden	- -
<u>Musa sp</u>	Tuu sp Rumutel	itchy mouth	S	4/70	Ngermid, Koror	- -
<u>Horsfieldia amklaal</u> Kan.	Emekiachel	stimulant	YI	7/70	Rendrok, Koror, strand	- -
<u>Horsfieldia palauensis</u> K.	Erasachel	fainting st.	L	7/70	Ngesoal, Koror, forest edge	- -
<u>Decaspermum fruticosum</u> F.	Kertaku	mental ill.	YI	1/69	Ngermid, Koror, savanna ed.	- -
<u>Eugenia cumini</u> (L.) Bru.	Mesekerrak	hernia	YI	8/70	Ngchelobel, isle, inter.	- -
<u>Eugenia javanica</u> Lam.	Robotel	cuts, afterbr.	YI	11/68	Ngerbechd., Koror, roadsd.	- -
<u>Eugenia reinwardtiana</u> K.	Kesil	chest pains	YI	6/69	Aulong, isle, strand	- -
<u>Psidium guajava</u> L.	Kuabang	stomachache	Fu	11/68	Entomol. Lab., Koror, gard.	- -

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Nepenthes mirabilis</u> Merr.	Meliik	bodyache, sores	Yl	1/69	Airai, Bab., savanna	- -
<u>Ludwigia octovalvis</u> Raven	Erur	dizziness	Yl	1/68	Ngermid, Koror, taro patch	- -
<u>Averhoa bilimbi</u> K.	Imekurs	cuts, venereal	Yl	12/68	Arakabasan, Koror, forest	+ -
<u>Averhoa carambola</u> L.	Kemin	cuts	Yl	12/68	Agricul. Sta, Koror, gard.	+ -
PALMAE to RHAMNACEAE						
<u>Areca catechu</u> L.	Bunch	cuts	Yl	8/70	Arakabasan, Koror, forest	+4 +4
		broken bones	Inflor	8/70	Arakabasan, Koror, forest	+4 +4
		venereal dis.	Yg. aerl	1/69	Ngermid, Koror, garden	+4 +4
		fish stings	Fr	1/69	Ngermid, Koror, garden	+4 +4
<u>Cocos nucifera</u> L.	Lius	cuts	Yl, L	8/70	Ngchelobel, isle, coconut	- -
	Duboch	diarrhea	Embryo	8/70	Ngchelobel, isle, coconut	- -
		punct. eardrum	Fr Base			- -
		tuberculosis	Fr			- -
		fish sting	Fu, St			- -
		afterbirth, meat				- -
		hernia, V.D.				- -
<u>Pandanus amirikiensis</u> Mart.	Chertochet	dissiness, V.D.	Yl	3/70	Ngergil, Airai, river bank	+4 +4
<u>Pandanus odoratissimus</u> Kan.	Ongor	vomiting	Yl	6/70	Airai, Bab, savanna	- -
<u>Ceratoptis thalictroides</u>	Tielauek	abortative	L	7/69	Airai, Bab., taro patch	- -
<u>Gleichenia linearis</u> var <u>fer.</u>	Itouch	hemostat	L	1/69	Ngermid, Koror, garden	- -
<u>Piper betel</u> L.	Kebei	abortative	Yl	8/70	Ngermid, Koror, garden	- -
<u>Piper fragile</u> Benth.	Kesebibui	massage	Yl	6/69	Airai, Bab., forest	- -
<u>Piper</u> sp.	Kebei l'yaur	internal mass.	Yl	3/70	Ngerenchol, isle, forest	+2 +2

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Polygonu minus var procerum</u>	Sekes (A)	ngasech	L	6/70	Angaur, taro patch	- -
<u>Antrophyum reticulatum</u>	Arr	toothache	L	6/70	Arakabasan, Koror, cliff	- -
<u>Asplenium nidus L.</u>	Buklbeluu	indigestion	Yl	1/69	Inwayama Bay, tree trunk	- -
<u>Dryopteris dentata Forst. C.</u>	Kilkuld	swollen gums	Yl	11/68	Ngesoal, Koror, forest ed	- -
<u>Nephrolepis acutifolia Pres.</u>	Amarsuuch	vitamins	L	4/70	Airai, Bab., mangroves	- -
<u>Polypodium scolopendria B.</u>	Ebechab	bodyache	L	6/69	Ngermid, Koror, forest	- -
<u>Pteris ensiformis var victoricae</u>		infections	L	6/70	Ngerbechd, Koror	- -
<u>Pteris tripartita Sw.</u>	Tangalikurs	cuts	L	3/70	Ngerbechd, Koror, garden	- -
<u>Pyrosia lanceolata Farw.</u>	Albeluu	cuts	L	1/69	Ngermid, Koror, forest	- -
<u>Vittaria incurvata Cav.</u>	Arr ra beluu	cuts, afterbirth	L	7/69	Airai, Bab, forest, trunk	- -
<u>Alphitonia carolinensis Hos.</u>	Elebiob	abortative	Yl	3/70	Airai, Bab., dry savanna	- -
RHIZOPHORACEAE to SAPOTACEAE						
<u>Bruguiera gymnorhiza Lam.</u>	Denges	ear drum	Yl, I	6/69	Rendrok, Koror, mangroves	- -
<u>Rhizophora mucronata</u>	Tebechel	broken bones	Yl, L	3/70	Airai, Bab.	- -
<u>Parinariu glaberrimum Hassk.</u>	Eritem	diarrhea	L	12/68	Ngermid, Koror, forest	- -
<u>Guettarda speciosa L.</u>	Blau	swollen areas	L	8/70	Rendrok, Koror, mangrove	- -
<u>Hedyotis albidopunctata Fosb.</u>	Kelel a malk	child delivery	L	6/69	Kayangel, above strand	- -
<u>Ixora casei Hance</u>	Kerdau	itching sores	Yl	7/69	Airai, Bab., wet forest	- -
<u>Morinda citrifolia L.</u>	Ngel	massage	L	11/68	Ngesoal, Koror, savanna ed-	- -
<u>Mussaenda sericea Bl.</u>	Dingel	afterbirth	Fu	11/68	Ngesoal, Koror, savanna +2	+2
	Erecheroi	cuts	Yl, F	11/68	Ngerbechd, Koror, roadway	- -

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Randia cochinchinensis</u> Merr.	Kerumes	broken bones	Yl	8/70	Iwayama Bay, isle, crevice	- -
<u>Randia racemosa</u> F. Villa	Kerumes	broken bones	Yl	7/69	Meiungs, Koror	- -
<u>Uncaria palauensis</u>	Drikel	mental illness	L	7/69	Kngsoal, Koror, forest edg	+3+3
<u>Citrus aurantiifolia</u> Swingle	Merandel sp malchianged	headache fishsting	Yl F	7/69	Airai, Bab. garden	- -
<u>Citrus limon</u> (L.) Burm. f.	Merandel sp. debechel	headache fishsting	Yl F	7/69	Airai, Bab.	- -
<u>Citrus</u> sp.	Bekersiu	int. bleeding	F	8/70	Ngerbechd, Koror, garden	- -
<u>Allophylus timorensis</u> Bl.	Ebludes	headache	L	8/70	Ngerbechd, Koror, forest edg.	- -
<u>Manilkara udoido</u> Kanehira	Uduid	afterbirth	Yl	7/69	Airai, Bab., forest	- -
SCROPHULARIACEAE to ZOSTERACEAE						
<u>Adenosma javanica</u> (Bl.) Koor.	Etermall	hernia	L	7/69	Airai, Bab., savanna	- -
<u>Angelonia augustifolia</u>	-	abortative	Yl	7/69	Airai, Bab., roadside	+ +2
<u>Limmophila aromatica</u> Merr.	Yaml	ngasech	L	7/69	Ngerbechd, Koror, taro patch-	- -
<u>Limmophila fragrans</u> Seem.	Ukelakal	afterbirth	L	7/69	Airai, Bab.	- -
<u>Capsicum annuum</u> L.	Meringel	abortative	F	11/68	Meiungs, Koror, garden	- -
<u>Nicotiana tabacum</u> L	Dekool	abortative	Yl, St	3/70	Ngermid, Koror, Airai, Bab.	+4+4
<u>Physalis angulata</u> L.	Bubeubedul	venereal dis.	Yl	7/69	Malakal, Koror, sandy area	- -
<u>Abroma augusta</u> L. f.	Lab	aphrodisiac	L	3/70	Ngerengchol, isle, forest	- -
<u>Symplocos palauensis</u> Koidz	Ebtui	punct. eardrum	R	6/70	Kayangel, coconut forest	- -
<u>Tacca leontopetaloides</u> O.Ktze	Esbocheb	hernia	Yl	7/69	Airai, Bab., dry savanna	- -
<u>Phaleria nisidai</u> Kanehira	Delalakar	burns	R	3/70	Arakabasa, Koror, savanna	- -
		aches, abortat.	L	12/68	Ngerbechd, Koror, roadside	- -

Scientific Name	Palauan	Use	Part	Month	Locality	Test
<u>Triumfetta procumbens</u> Forst.	Kerkar (K)	cuts	Y1	6/70	Kayangel, strand	-
<u>Centella asiatica</u> L.	Urban	Dingal ra beab	L	7/69	Arakabasa, Koror, garden	-
<u>Elatostemma stoloniforme</u> Ka.	Duchus (K)	infection	St	6/70	Kayangel, wet area	-
<u>Laportea ruderalis</u> Forst.	C. Onkegad	boils, aphro.	L	6/70	Kayangel, under coconuts	-
<u>Pipturus argenteus</u>	Eremallueang	boils	Ib	6/70	Kayangel, ab strand flora	-
<u>Callicarpa candidans</u> Hoch.	Dub sp. rsachel	sores	Y1	7/69	Airai, Bab., savanna edge	-
<u>Clerodendrum incrm</u> (L.)	Emrert	ringworm	L	3/70	Airai, Bab., mangrove edge	-
<u>Clerodendrum paniculatum</u>	Butecherar ra	stomache	L	7/69	Ngerbechd, Koror, garden	-
	Ngebard					
<u>Clerodendrum speciosissimum</u>	Butecherar	headsore	L	3/70	Ngerengchol, isle, forest	-
<u>Cordia subcordata</u> Lam.	Kalau	cuts, abortat.	L	1/69	Ngermid, Koror, forest	+4+4
<u>Premna obtusifolia</u> R. Br.	Chosm	cuts, sores	L	11/68	Arakabasanm Koror, forest	-
		stonefish	Ib	11/68		
<u>Vitex negunda</u> var <u>bicolor</u>	Klsechedui	coughing	L	7/68	Airai, Bab., forest edge	-
<u>Cayratia trifolia</u> (L.) Quis	Berdaki	dietary suppl.	L	7/69	Ngermid, Koror, forest	-
<u>Leea brunoniana</u> Clark	Sengall	stomach,	L	7/69	Ngermid, Koror, forest	-
<u>Alpinia pubiflora</u> Schum	Delebedeches	fishsting	Y1	3/70	Meiungs, Koror, forest	-
<u>Costus seriaceus</u> Bl.	Isebsab	stomache	Y1	7/69	Airai, Bab., forest edge	-
		hernia	R			
		end childbr.	Fl, Fr			
<u>Curcuma domestica</u> Valet	Kesol	skin allergy	R	12/68	Ngermid, Koror, garden	-
<u>Zostera</u> sp.	Arr	fishsting	L,R	1/69	Rendrok, Koror, ocean	-